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Guide

VOLUME IV, NUMBER 11

AUGUST 23, 1937



MAPPING THE ROUTE TO PLENTY

CONSUMERS'

Guide

Issued every two weeks by the Consumers' Counsel, Agricultural Adjustment Administration, Department of Agriculture, Washington, D. C.

VOL. IV, No. 11 AUGUST 23, 1937

THERE'S punch in this farm woman's challenge to city and rural women to get together on producer-consumer problems. She's Mrs. Charles W. Sewell, administrative director of the Associated Women of the American Farm Bureau Federation. "I wonder", Mrs. Sewell asks, "if city folk know how many enemies we combat to produce the foodstuffs for the average city table. I fear sometimes that many feel as did the bride who, hearing of a proposed farmers' strike, said complacently, 'Let the rubes strike if they want to. I can get everything I want at the grocery store.'"

"Start with the orange juice on the breakfast table. Long hours of tedious hand labor and intensive cultivation go into producing and harvesting the golden fruit. Expensive spray materials and fertilizers must be purchased and applied; and grading, packing, storage, and transportation charges come from the price the farmer receives.

"Next think of the bacon. Time was when hog raising was a simple process. Little thought or planning went into the job. Nowadays, it's a real art. A pig is no longer just a pig. The McClean system of swine management now in vogue throughout the Corn Belt, calls for care and equipment that surround a brood sow with more sanitary safeguards than are available to many mothers of men. Mary and Johnny may not receive the Schick test and toxin-antitoxin for diphtheria prevention,

but few farmers are brave enough to let the hogs go without vaccination against cholera. In the days gone by, hogs grew on grass and acorns with a little corn thrown in; now, they must have minerals and vitamins, balanced with the precision of modern scientists and chemists. All this must be added to food costs.

"The egg that accompanies the bacon or ham comes from a flock of hens as temperamental as a prima donna. No longer does 'Biddy' roam over the fields in summer or roost in an apple tree in winter. She must be housed comfortably and fed the ingredients that go into egg manufacture, else she won't lay and all the inventions of modern discovery have as yet failed to have her lay the maximum number of eggs when prices are at their peak. . . .

"And when you spread on the butter or poured the cream into your coffee, did you say, 'I can't understand why the price of dairy products is rising?' Or did you discuss the long, long trail a-winding from producer to consumer? Did you think of the dairy farmer and his family, of the labor and expense involved in producing high-grade milk and butter? The necessity of tuberculin test in order that your family may be protected against infection, expensive equipment for cooling and bottling, and the extravagant system of distribution, all affect the price received by the farmer.

"I sat in a city apartment building a few weeks ago and counted the wagons of 10 different distributors plying up and down a single street.

"Whose fault is it? No one individual or industry can be indicted, but simply an accumulation of practices that have grown up since commerce and trade were begun in America.

"Who is going to change it? To use a slang phrase, it's 'up to the women.' The better understanding between urban and rural women, a

study of government and its agencies by both groups, the understanding that will enable each to discriminate between facts and propaganda, a determination possessed by pioneer women to right wrong—all this can help to solve the mutual problems of producer and consumer."

COMMENTARY on the present status of consumer literacy: A large manufacturer of breakfast foods recently conducted a test sales campaign. Consumers were offered identical packages at two prices—a single package at 10 cents, two packages for 23 cents. The report of this test does not reveal whether or not it was conducted in different stores, but, however it was staged, results showed that 33 percent more packages of the breakfast food were sold at the 2-for-23-cents price than at 10 cents a package. . . . At least one of the "Three R's" for consumers should be READ THE LABEL.

COMMERCIAL fraud, says a prominent merchant, is very much like the weather; everyone talks about it but no one does anything about it. The exception which proves the rule in this case is the creation of an Advisory Council for the Prevention of Commercial Fraud. Outgrowth of an earlier conference attended by 300 civic leaders, the Council hopes to join trade groups, consumer organizations, Better Business Bureaus, and law-enforcement agencies in a united front to stamp out fraud. Among the organizations represented on the Council are the New York City Federation of Womens' Clubs and the New York State League of Women Voters. It is claimed that a toll of several billion dollars a year is exacted from consumers by frauds such as fake "sales" under captions of "going out of business", "wholesaler selling at retail", "loan" sharks, "trace your ancestry" game, "fortune telling" rackets, etc.

MAPPING THE ROUTE TO PLENTY

**Representatives of governments, workers,
and employers turn the spotlight on workers'
need for better nutrition and agriculture's
capacity to supply that need**

A SCIENTIST tossed down a book he was reading the other day about the River Nile. Crammed full of important facts, this book represented the results of immense research about one of the great arteries of industry and trade. But to the scientist the book had a major flaw. The author had started his tale with the river's source, tracing its course from little headwaters down to the great wide mouth where the commerce of the world paused and passed. "The life of a river", said the scientist, "starts with its mouth. When a great story of the Nile is written, it will start there."

Where this story should start is harder to tell. It might begin with sleek-coated pink-eyed rats, for they are an essential part of its plot. It might start with the great experts in nutrition, without whose sharp eyes, keen minds, and patient research the story could not be told. Other scientists, inventors, technicians, who have sharpened our tools and refined our knowledge of how to produce, have their part in the story. Another beginning might take us back 18 years to the first of a series of great international conclaves. A paradox might start the piece—the paradox that depression made grim, of millions of hungry people looking on mountainous supplies of food which they could not reach, and of producers and machinery, ready to supply the things humans want, left idle and unemployed.

Stories should have their heroes, and no better start could be made on this one than to begin with its central character. He is a worker, any worker—a puddler in the steel mills in Youngstown, a coolie in Shanghai, a miner in Spain, a shoemaker in Czechoslovakia, an impoverished colored sharecropper in our own South. He is you. He is us.

Among us, happily, there are differences galore. Differences in the way we talk, in how we live, in what makes us laugh, in what we love. On the other side of the picture there are the things that are common to every one of us, and no one more important than this: We have to work to live.

Now the basis of good living means being free to enjoy certain kinds of things. To you living in an air-cooled house may be one of your ideas of a good life. To the Alaskan canner it might be a joke. Filet mignon may be your idea of good food; to the Chinese coolie it may taste worse than castor oil. The Czech shoemaker may like to wear ribbons around his waist; you, a belt. You like green peppers; we don't. Try your hand at listing the things you want for even modest living, and you will see how involved the list becomes. To do that for every worker everywhere would be a herculean task. One ingredient of well-being, however, would appear in every list: all of us want healthy bodies.

This is where the pink-eyed rats and the keen-eyed scientists come in. In hundreds of laboratories over the world these and other animals have been helping scientists to learn what makes for good nutrition and how good nutrition can build sound bodies. Generations of these animals have come and gone, and each one that has been studied by the scientists has made it possible for humans to be a little wiser about a major problem of their lives, to know what food can do to contribute to their health and well-being.

Most of us know by now that no food nor any set of foods in the world has a monopoly on the ingredients that build healthy bodies. A good diet for health does not have to include filet mignon. String beans in themselves are not important; it's what the food scientists call "nutrients" in food that, in the right amount and the right variety, make for a health-building diet.

Enough research has been done on these nutrients to give us fairly definite recipes, using an infinite variety of foods to fit each palate but balancing in the quantity and kind of nutrients bodies need, which will result in a healthy diet for the Chinese coolie, the Czech shoemaker, the sharecropper, you, and us.

Science is fighting through in its laboratories this troublesome, difficult problem of defining just one of the things workers want for the good life. It is drawing up standards that

will be as true for those who live in Minneapolis as for those who live in Madagascar. They are not final and ultimate standards, because all the time research is refining and improving our knowledge of nutrition. But they are workable rules of health, ready to be put to use.

Knowing what is good for us and getting it are, bitterly enough, two different things. Science defines the first. It does more. It shows us how to produce the things that we want. Just as nutritionists have made great progress in the past two decades, experts in the technique of producing foods have gone shooting ahead, immensely increasing our capacity to get the kinds and amounts of foods we need.

There science leaves off, and economics takes on. So far economics has made a messy job of seeing that we get what we need. If we ever had any doubts about that, depression should have cured us. One of the reasons why, science suggests, is that we go after getting what we want hind-end to. Because we buy the things we want with money, getting more money becomes to most of us the thing most worth fighting for. But we can't eat money; we can't wear it; we can't live in it. And while a dollar this year may buy all the potatoes we want, next year we may have to spend \$1.20 for this same amount of potatoes.

Building toward a day when all workers will get the kind of nourishment their bodies need is a kind of bridge-building job. On the one side we pile up the facts about the foods we want produced, how many, what kind, when they should come to us. On the other, we must know how to produce these foods. Between these, a two-way traffic span must be built. Building such a bridge for goods other than food is a more difficult job because we have not worked out yet any scientific body of facts on which to base hu-



More pay may look better . . . but it's more goods that count.

man needs for such goods. But with foods it is possible to do a fairly competent job of stacking up the two towers of facts between which the span is to hang.

Now, figures of speech such as this don't make copy. They are old stuff. There is news, thrilling and important, in this world-wide search for the answer to the tangled problem of how to get nourishment and enough of it to millions of workers. This news comes from Geneva, Switzerland.

Eighteen years ago the representatives of many of the nations of the world gathered together to talk about the difficulties of their working people. The workers back home were tired of war. They wanted peace. Out of the talk grew a plan for an International Labor Conference to which representatives of governments, employers, and workers would be invited each year. An International Labor Office, staffed with experts, would be permanently set up and serve the needs of the conference. A charter was drawn.

"Whereas", read the preamble of this charter, creating in 1919 the

International Labor Conference, "conditions of labor exist involving such injustice, hardship, and privation to large numbers of people as to produce unrest so great that the peace and harmony of the world are imperiled; and an improvement of those conditions is urgently required. . . ."

And "Whereas also the failure of any nation to adopt humane conditions of labor is an obstacle in the way of other nations which desire to improve the conditions of their own countries" . . . we will attempt together to make recommendations to our various countries on how conditions of labor can be improved.

Year by year, since the creation of this International Labor Conference and the International Labor Office, the problem of building the foundations of peace by bringing about "humane conditions of labor" throughout the world has been talked about by the representatives of many nations, our own included, at the little city of Geneva, Switzerland. Resolutions have been adopted; "draft conventions" they are called. In 16 years, there have been 49; 44 nations have

approved some of the principles in these conventions and made them rules for the protection of the workers of their countries. Most of the rules proposed have to do with limiting hours of work, providing insurance and protections of various kinds on the job, setting minimum wages, limiting child labor.

Depression gave a new twist to the thinking of these delegates. We have been talking, they said in effect, about the need for abolishing poverty, for raising the standard of workers' living. We have been trying to give a lift toward both by proposing to member nations legislation which will standardize conditions of and rewards for work and raise those standards to higher levels. But a living wage in Sumatra may be a starvation wage in St. Louis. What is a tolerable workday in Calcutta may be intolerable in Calgary. What is security for workers in Korea may be insecurity in Kalamazoo. What is a fair price in New Guinea may be a sweated price in New York.

Instead of tackling the problem solely from the point of view of income of workers and all the variables that involves, these conferees proposed, in substance, to look at it also from the point of view of workers as consumers of goods. "Start with what we know about adequate nutrition", they suggested. "From there, let us draw up a picture of the diets on which workers are now attempting to live and work. Against this, let's measure agriculture's capacity to produce the foods workers need. Such pictures as these will give us a chart of our problems, clear-cut, definite, measurable, in terms everybody can understand. In itself such a chart will not solve the problem of a decent living, but we will know better what to work toward. And in working toward that goal we may at the same time help to open the route to re-

covery for agriculture which, like labor, has suffered severely in depression years."

Thus was born one of the most important international research jobs ever undertaken. Years of patient digging into the records must come before any adequate results are at hand. But the first preliminary report is out. The International Labor Office has published a 250-page book, called "Workers' Nutrition and Social Policy", chock full of fascinating and provocative records.

No picture, this, of the malnutrition among *all* the people of *every* country surveyed. Only the diet problems of "those people who obtain their incomes primarily from the labor of their hands and brains and not from property" are examined. Even among this group, there are large omissions—diets of the unemployed and of agricultural workers, for instance. Because existing data require it, the study extends chiefly to industrial workers and their families in European countries and the United States. This selection of countries was not arbitrary but due to the fact that research on workers' diets affording a basis of comparison was there to be built on.

Even within this group of workers and of countries, gaps in knowledge show up. More must be learned of the effect on health of work conditions in mines, factories, and shops, before the picture of diet requirements is complete. Nutrition studies are needed to tell more about the influence of climate, race, and environment on food habits. Shortage of facts, too, appear in the records of actual foods consumed by workers in different occupations and by members of workers' families.

Despite such limitations, despite the fact that the data relate on the whole to the better-paid section of industrial workers, the researchers conclude that the facts they have

brought together are representative of an important mass of workers and that "there would seem to be sufficient reason to accept some of the startling statements made within recent months by people in various countries of the wide extent and the serious character of the nutrition problem among the working population. And if the problem is serious with regard to workers at work, how much more serious must it be for large groups of unemployed workers."

Conclusion No. 1 that stands out sharp against the background of figures and statistics is that "large numbers of workers not only in impoverished or depressed areas but even in the most advanced industrial countries are inadequately nourished", and that this "condition is not just a depression phenomenon; it is found among many employed workers in times of normal business activity."

Conclusion No. 2, equally sharp to these explorers into international food problems, is that the "main ground for inadequate nutrition is not so much the ineffective use of existing incomes as the insufficiency of the incomes themselves, however wisely spent."

American experts in the Bureau of Home Economics of the United

Technically, say the researchers into workers' nutrition problems, agriculture in major countries is in a position to meet the requirements for foodstuffs for an adequate diet. Putting potentialities into practice is the economic problem facing nations.



States Department of Agriculture, focusing their attention on the diets of workers' families in various regions of this country, would modify somewhat this Conclusion No. 2. (See CONSUMERS' GUIDE, June 14, 1937.) While they, too, found that the quality, as well as the quantity, of the diet tends to improve as workers' incomes grew, they also found that some workers achieve a good diet on little money, while others miss it with more money. Knowing and applying good nutrition rules, along with better incomes, they conclude, is an equally important route to well-being. American records show that below a certain food-money level no worker gets a safe diet, however carefully he may plan his expenditures; above a certain level practically all workers get a safe diet. Between these lower and upper levels are the great mass of workers, some of whom achieve good diets and some of whom fail to do so. Quite evidently in this group there is large need for educational helps in the wise selection of foods.

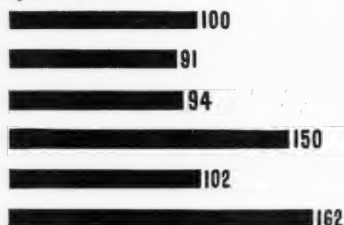
Variations in food consumption according to family income within the countries bear out the conclusion that more money means not just more food but better nutrition. Bread and cereals are among the cheapest ways to get calories. In Germany, Czechoslovakia, Belgium, and Sweden, the report shows, the amount of these high-calorie foods decreases as income grows. In Poland the amount increases with income at first, then drops off. Meats and fish are a relatively expensive way to get calories. All countries studied show that the amount which workers' families buy grows as income grows. Amounts of fats other than butter are relatively high at lower-income levels and lower at higher-income levels.

Protective foods—the kind that do more than give energy, that help bodies to grow strong and able to

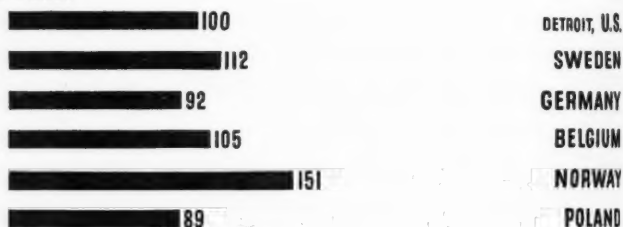
How consumption of these foods by wage earners in Detroit compared with consumption by workers in other countries*

(This is an approximate picture only, based on as accurate studies as were available, for average quantities of foodstuffs consumed per "consumption unit." Studies were made at various times from 1927 to 1929 in all countries but Sweden; in Sweden, 1933.)

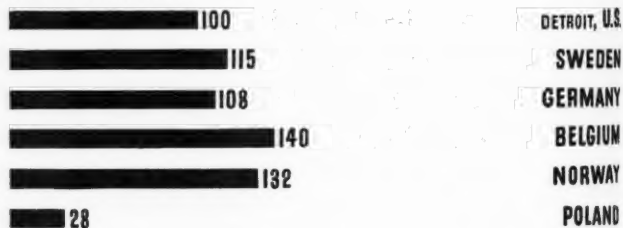
FLOUR EQUIVALENT



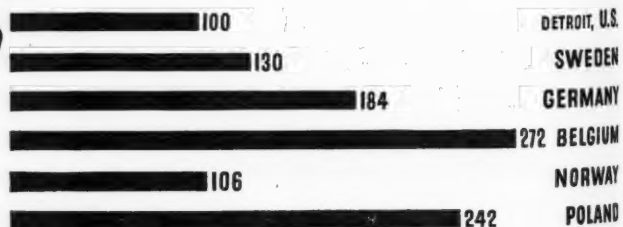
MEAT & FISH



MARGARINE & BUTTER



POTATOES



*Based on data in "Workers' Nutrition and Social Policy."

resist the strains—climb up with income. Milk, milk products, eggs, fresh fruits, and vegetables in most countries are more costly than the high-calorie foods, so they can find only a small place in diets that must be purchased with a few pennies a day. Only when those pennies are increased do protective foods have a better chance to appear on workers' tables.

In November 1935 a Technical Commission of the Health Committee of the League of Nations at a meeting in London laid down a certain number of nutritive requirements for an adequate diet. Significant items in these "London standards" are: (1) That a minimum of 2,400 net calories a day is essential for the maintenance of

health of the average person not engaged in manual labor in countries of temperate climate; (2) that additional increments of calories must be supplied for various kinds of work ranging from 50 calories per hour for light work to 100 or more calories for heavy work; (3) that the number of calories must be supplied by a variety of foodstuffs, including about 70 grams of protein a day for persons weighing an average of about 154 pounds, and that part of such proteins must be of animal origin; and (4) that a sufficient quantity of minerals and vitamins must be contained in the diet.

Applying such yardsticks of adequate diet against the record of workers' food consumption, many grave conditions show up. On the

score of calories—one useful device for measuring the quantitative adequacy of diets—low-income workers studied have hard going. The average number of calories in the diets of these workers is scanty for people who do moderately active work; for those whose work is heavy, the diets are more than slim in their allowance of calories. At the top wage levels studied, the average worker's daily diet was found to be safely above the 3,000 mark.

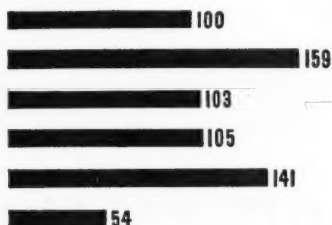
On the whole, however, the report concludes, "widespread deficiencies must by implication be supposed to exist even with respect to quantities of food consumed." As workers become better off economically, the report points out, the consumption of calories continues to increase "even in industrially advanced countries. . . . This, again, indicates that there is a considerable potential quantitative demand for food which would materialize in effective demand if the necessary purchasing power were put at the command of the groups concerned."

Workers' budgets in general throughout the countries studied show not only quantitative deficiencies but "also and above all a low consumption of protective foods." Not enough is known yet about these budgets to line up the record in cold figures, but the report states: "Even if one accepts the consumption of the more advanced countries as roughly adequate, great increases in consumption, particularly of the 'protective' foods, are required to bring the majority of other countries into line."

Tremendously important to agriculture, continuously searching for greater markets, is this picture of the great need for more and better quality of nourishment by the millions upon millions of workers. Significant, too, is the observation of the survey that when economic pressure

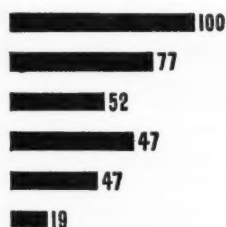
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MILK & CHEESE



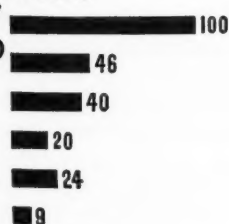
DETROIT, U.S.
SWEDEN
GERMANY
BELGIUM
NORWAY
POLAND

EGGS



DETROIT, U.S.
SWEDEN
GERMANY
BELGIUM
NORWAY
POLAND

FRESH FRUITS



DETROIT, U.S.
SWEDEN
GERMANY
BELGIUM
NORWAY
POLAND

AUGUST 23, 1937



Grapes

ON THE FRUIT CALENDAR

September and October fill market baskets with their greatest supply of grapes for consumers who like them fresh

LONG before geographers hit on the name of America for the New World, Leif the Lucky had christened it Wineland. He named it in honor of the native grapes discovered by his men as they explored the New England coastline. Had these Vikings pressed farther inland, they would have been even more struck with the aptness of their choice, for wild grapes grew from coast to coast.

With the cultivation of these native sorts and the growing of Old World wine grapes in California, grape growing strode into the ranks of big business. Repeal of the Volstead Act gave grape growing a boost, until it took fourth place among fruits in point of farm value. This year promises the largest grape

crop since 1928, its tonnage touching the 2,500,000 mark. Over four-fifths of this harvest will come from a single State—California.

Part of this bumper grape harvest will go to wine vats. Part will be packaged as raisins or bottled as grape juice. At this particular season, however, grapes concern consumers mainly as a table delicacy—for they are coming plump and sweet to markets all over the country. Not only does their flavor appeal to flagging appetites, but grapes

are nutritious. They contain 7 to 20 percent sugar, some Vitamin B, and a fair supply of iron.

Main types of table grapes are the European or *Vitis vinifera* grape varieties grown chiefly in California, and the American *euvtis* of the Eastern States. A third type, the Muscadine, grows widely in the South Atlantic and Gulf States, but doesn't play an important part in shipping. Look for this sort, well represented by the Scuppernong, in local Southern markets.

Vitis vinifera varieties have a higher sugar content than the American varieties. Because of this sweetness they make fine wine and raisins—in fact, no eastern grapes go into the raisin industry. Seeds separate readily from the pulp, though there is no getting skin and pulp apart. Running through a color range of red, white, and black, the more popular western table grapes are the Flame Tokay, Hamburg, Cornichon, Malaga, and Sultanina.

"Red, Father of Red"—that in translation is the Algerian name for the Flame Tokay—and admirably suited it is. Originating in Algeria, the Flame Tokay is one of the most extensively grown shipping grapes in California, though about equal quantities of Tokays, Thompsons, and Emperors are shipped from the State. Clusters are large, bearing fruits that are firm, though not particularly juicy. Red skin is medium thick and medium tough. It covers a greenish-white pulp that has a rather insipid taste—somewhat like sweetened water. October is the month for Tokays.

Two months earlier the Sultanina comes to market, better known as the Thompson Seedless—the seedless-raisin grape of commerce. The clusters run as long as 16 inches, though 10 would be nearer the average size. The oblong, medium-sized berries are light yellowish green in color, flushed when fully ripe and having a frosty-white bloom. The flavor is sweet, pointed up with a delicious nippy acid tang.

Crowning piece in many bon voyage baskets is a magnificent bunch of Hamburg grapes, the berries glowing round and coal black against their green leaves. The skin is thick and fairly tough, but the flesh is tender with an interestingly rich, aromatic sweetness. The Hamburg ripens in late September, but you can count on Hamburgs the year

round if you are willing to pay the price, for they are grown more extensively under glass than any other variety.

To turn to the American *euvitis* varieties. These are derived mainly from native bunch species. Here again we have a color scheme of red, white, blue, and black. Unlike the western grapes, these eastern varieties have slippery globules of flesh that can be easily popped from their skins. Hence the name "slipskins." To some, these "slipskins" have an unpleasant musky or "foxy" odor—so-called because it resembles the odor of a fox. Many consumers, however, prefer eastern grapes because they are more refreshing, do not cloy the appetite as do their richer western relatives. Though there are few localities where some eastern grapes aren't grown, the largest supplies for table and juice purposes come from New York, Michigan, and Pennsylvania.

Native of Concord, Mass., the Concord grape—a variety of *euvitis*—is most widely grown of any on this continent. Its plantings reach to California. In the form of grape juice and jelly, to which much of it is converted, it can reach the most out-of-the-way hamlet. The berries are medium-sized with black skin dusted over with a blue bloom. The pale-green flesh, though sweet at the skin, is tart next to the seeds. Seeds cling tenaciously to the pulp, but pulp slips easily from the outer skin.

Champion American table grape in eating quality is the Delaware, with its sprightly flavor and agreeable aroma. Its clusters bear light-red berries covered with a lilac bloom. The flesh is of a transparent light green, tender and juicy.

Whatever their origin, grapes for table use should have certain characteristics in common.

First, they should have a fresh appearance—that's almost axiomatic for any fruit. They should be mature

as indicated by their plumpness and high color for the variety and should be firmly attached to the stems. For juice purposes maturity is number one point of importance, but it won't matter whether or not the berries "shatter" from the stems provided they are not dried or shriveled.

High color for a variety means well-developed sugar content and good flavor. Some American grapes remain green in color even when ripe, but generally the white or green grapes of Europe and America turn amber when at their best.

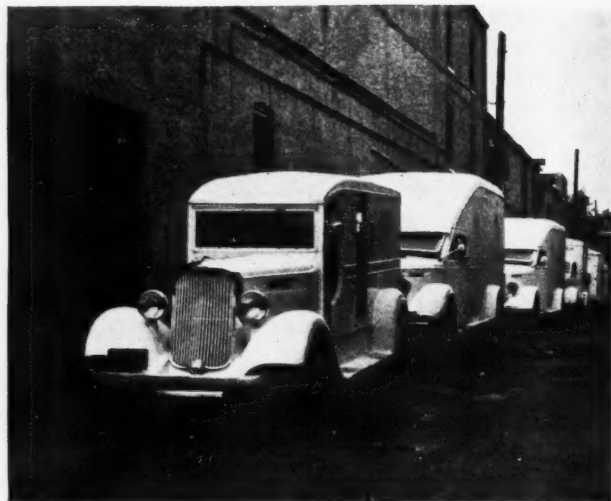
Frost injures grapes, leaves the fruit rather flat in flavor. Western grapes injured by frost will have a dull appearance, become sticky, and shatter from their stems too readily. If such frost-nipped berries are picked, the brush—that is the bundle of fibers extending from the cap stem into the berry—is discolored and short.

Eastern varieties of grapes touched by frost shrivel. Pulp becomes milky in appearance. When such a berry is pulled from the cap stem, the brush often remains in the berry. However, you shouldn't be troubled with frost-bitten berries for another month or so.

Avoid decay in berries. This shows itself in mold and wet berries. Look over the berry container to see if it is leaky and stained—both indications of decay.

As in the case of other fruits, the United States Department of Agriculture has set up standards for eastern- and western-type table grapes and juice grapes. Though these are of more direct benefit to the trade than to individual consumers, buyers can get a good idea of what to look for in a grape by reading through the grades and definitions of terms as set forth in leaflets on U. S. Standards distributed free by the Bureau of Agricultural Economics, United States Department of Agriculture, Washington, D. C.

MILK PARADE



From doorsteps of city milk plants to doorsteps of city consumers, we explore—in this second of our series on Milk for Millions—the tangled web of prices and costs of this champion food*

TIME may march on, but milk flows down in a modern milk plant. Some plants may not harness gravity to move milk, may even process the milk completely on one floor, but by gravity or pressure pump, the steps that milk must go through before it is fit to drink are the same by modern health regulations. From the glass-lined, white-enameled storage tanks the milk flows through either a filter or a clarifier, which serves to remove from the milk all foreign substances which may have escaped detection until that time. The clarifier is a round drumlike tank inside of which the milk is whirled at high speed until it is clean.

Cleaned, the milk then tumbles through stainless pipes to the next process, preheating, where it is heated to a temperature of 120 degrees, preparatory to pasteurization.

Pasteurized milk is simply milk heated until harmful bacteria in it are killed. Today there are three

methods of pasteurization: The flash process, in which milk is brought up to a temperature of 160 degrees for 15 to 30 seconds; bottle pasteurization, by which the milk is heated in the bottles; and the third method, the one which is in use in most cities, in which every particle of milk is heated to a temperature of 142 degrees and kept at that temperature for 30 minutes. The Standard Milk Ordinance of the United States Public Health Service recommends that the thermometer read 143½ degrees for the 30 minutes to insure complete pasteurization.

Historically famous microbe hunter, Louis Pasteur, nineteenth century French scientist, discovered the process known as pasteurization while he was trying to save the French wine industry from the ravages of uncontrolled fermentation. Fermentation was caused by bacteria, he discovered, and heat killed bacteria. By heating wine the bacteria could be killed, the fermentation controlled.

Epidemics in the nineteenth century led to the pasteurization of milk. First pasteurizers were ridiculed; many dealers advertised uncooked milk to minimize the advantages of the pasteurized kind. But slowly, surely, the gospel of pasteurization spread until now all large cities require the pasteurization of most commercial milk. Chief exception is certified milk which is not pasteurized.

Bacteria are as hard to generalize about as people. Not all of them are bad. The bad bacteria, the pathogenic kind, the evil harbingers of tuberculosis, undulant fever, septic sore throat, diphtheria, typhoid, and other diseases—all of these die at relatively low temperatures. In addition, however, there are good bacteria in milk, the lactic-acid bacteria. They help digestion and at the same time are the rank-and-file soldiers in the white hosts that fight disease bacteria in the body. Then, too, there are the "peptonizers", another group of bacteria that help to digest

*First of the series appeared in our August 9, 1937, issue.

food. These good bacteria fortunately have a greater resistance to heat than the disease-inducing bacteria. But if the milk is heated too much during pasteurization they, too, are killed, and some of the nutritive value of the milk is lost. Therefore milk must be heated not too hot, not too cold.

Milk for pasteurization in typical milk plants is introduced into a great tile drum inside of which are contained a number of rotating cylinders. Inside these cylinders the milk is heated, while the cylinders themselves move slowly around inside the drum. The round trip takes exactly 30 minutes.

To insure proper pasteurization many health departments require that the pasteurizing equipment be fitted with devices which record the amount of milk that passes through them, the temperature to which the milk was submitted, and the length of time the milk remained in the pasteurization process. These records, kept by automatic pens on rolls of paper, are inspected by public health authorities.

Hot milk must be cooled. In a modern plant, this is done by a most

ingenious trick, called the regenerative cooler-heater system. Cold milk passing into the pasteurizing tanks is tricked into cooling the hot milk coming out of the tanks. By means of double tubes, one inside the other, the cold milk on its way to being pasteurized is heated by the hot milk coming out.

At the bottom of the milk cascade are the filling and bottling machines. The filling machine is a cylindrical device with a crown of stainless-steel tubes. Milk bottles move single file in a circle around the base of this machine on a moving belt. Automatically each tube settles down over a milk bottle, and then by a vacuum process floods milk into the bottle until it is filled. From there the milk bottles single-file along their moving belt to a similar capping machine, which fastens caps over the bottles. The belt moves on, carrying the milk to refrigerators where it is crated preparatory to final delivery to consumers.

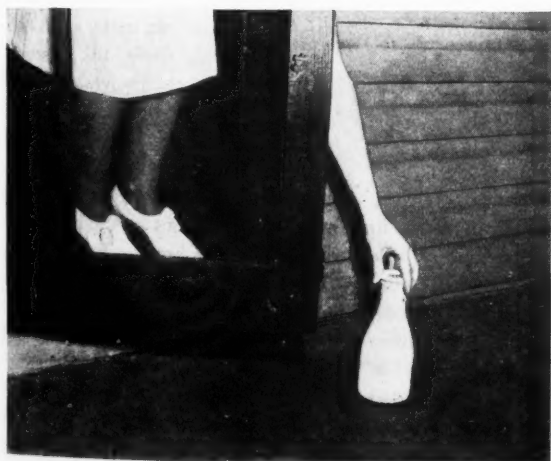
Sanitary milk would be a grim joke, however, in dirty bottles. Strategic point in any milk plant, then, is the bottle-cleaning machine. Like all other processes this is automatic.

The continuous automatic bottle washer looks like a giant tile-and-glass war tank without the caterpillar tread. At one end of it, bottles are fed into a slotted frame. Then the frame turns over, the bottles are immersed in a caustic solution, carried through it and reamed out with rotating spindle brushes, and doused in a chlorine solution. Finally washed and sterile, they are ejected onto a moving belt which carries them under the filling machines, in a long, single file. Inspectors along the way examine the milk bottles for defects, and the automatic filling machine sensitively examines the bottle rims for chips or cracks. If it discovers a chip or crack, with an uncanny canniness it refuses to fill the defective bottle; thus notifies the attendant, who removes it.

Final safeguard in an ideal milk plant is the nightly housecleaning. Each night after the milk is all bottled for the next day, the equipment is dismantled by experts, washed, sterilized, and reassembled. Perhaps a milk plant is the only modern industrial establishment which is completely dismantled and sterilized every working day.

Doorstep delivery rolls up the cost of milk. Consumers who ask for this and other special delivery services must pay the price.

Consumers who buy their milk at stores and deliver it themselves, in some cities are still taxed for a service they do not get.



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Neapolitan milk men drive their cows through the city streets, deliver milk to their waiting customers directly from the cow's udder into a pitcher. For highly prized customers who use goat milk in Naples the milk man leads his goat by a rope straight to the consumer's kitchen. In Holland and Belgium milk is delivered from dog carts. The Mongolian on the inner plateaus of Asia rides his milk supply, dismounts from his mare, and milks her into whatever container Mongolians have. The streets of Turkey are crowded with goats whose masters deliver milk directly from the goat to the consumer for a copper coin.

Cows, goats, mares, none of these milk animals clutter up the streets of American cities waiting for consumers, but if cows, goats, and mares don't, certainly milk men with their familiar rubber-tired wagons or trucks do. A study of the milk-distributing companies in Milwaukee made by Milwaukee's Common Council in cooperation with the CWA, the FERA, and the Department of Agriculture, revealed that on one day, March 16, 1934, the milk trucks of 17 companies paraded up and down one city block to serve the customers in that block. In two blocks 15 milk wagons marched and countermarched to deliver milk. One thousand and twenty city blocks in Milwaukee were studied on March 16, 1934. In every block except one, at least two companies made deliveries. In 800 of the 1,020 blocks, five companies went in and out during the day to deliver milk. Six companies delivered milk in 146 different blocks, and in 147 other blocks seven companies competed with each other. In two houses nine companies made deliveries.

Competition in milk distribution results in a musical comedy parade of milk men up and down the streets of American cities. But besides, it contributes to higher prices of milk.

No. 1 charge on the portion of the milk dollar the distributor receives is the cost of delivery. Studies of the Federal Trade Commission in Baltimore, Boston, Cincinnati, and St. Louis reveal that in 4 years, 1930, 1933, 1934, and 1935, the cost of delivery alone took from 21 to 28 cents of the consumer's milk dollar. Processing the milk in 11 distribution plants took only 10 cents of the consumer's milk dollar in these years.

Statistics about the milk business are as much disputed as politics. No one has ever emerged from a study of the milk business with unchallenged figures. The reason for this is not simply that some people are bullheaded and can't be made to believe anything. Part of the reason may be that one company uses one method of figuring costs, another company another method, with the result that statistics from different companies are hardly ever comparable. Government investigators studying milk companies may use still another method, decide that some costs recognized by the company are not true costs at all.

At the basis of the confusion is the fact that the distributing company's primary concern is the sale of fluid milk and cream, but along with milk they sell butter, cheese, eggs, chocolate milk, and malted-milk preparations. Some milk companies even sell bread and others a processed form of orange juice. Several investigated by the Federal Trade Commission sold honey. A yet unsolved problem of milk is how to charge to these various commodities the cost of selling them.

The Federal Trade Commission in a report on the distribution and sale of milk and milk products in Boston, Baltimore, Cincinnati, and St. Louis has said: "Data were collected from seven milk distributors. Each of these seven milk distributors divided his total delivery and selling expense each month among the various vari-

eties of commodity handled. Among the seven distributors four different methods of making this distribution were used. Not all four methods of making this division could possibly be right, so that at least three of the methods were incorrect—and it is believed that all four methods were incorrect in some phase or other."

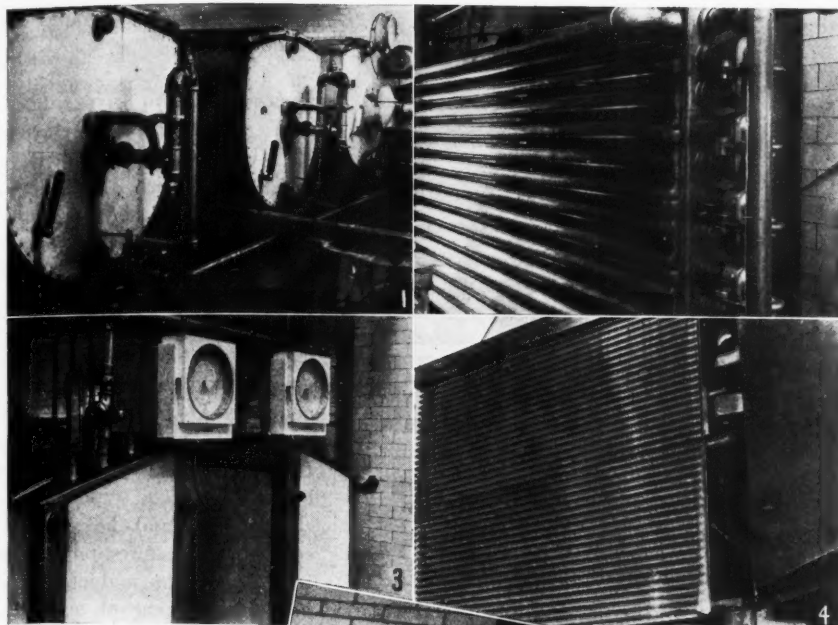
Delivery costs for the seven distributors in the four cities studied by the Federal Trade Commission indicate clearly, however, where a good part of the consumer's milk dollar goes. It goes into the costs of the daily milk carnival, the parade of the rubber-tired milk wagons. Costs ranged, in October 1935, from a low of 2.74 cents a quart for all grades of milk to a high of 5.23 cents a quart. Cream delivery costs per quart ranged from a low of 6.70 cents to a high of 11.52 cents.

Consumers are not entirely free of responsibility for the size of milk delivery costs, however. They demand doorstep delivery. If for some reason a consumer does not get milk one morning and calls the milk company to dispatch to her immediately a pint or a quart of milk by special delivery, she runs up the cost. Such services are expensive, and for calling this tune consumers must pay a stiff price to the piper. But when consumers do not demand fancy delivery services they should not be required to pay for them. In many cities consumers who buy their milk at stores, and deliver it themselves, are still taxed for the cost of a delivery service they do not get.

Delivery through retail stores may save 1 cent a quart, possibly more, in handling expenses compared with delivery to the home. Substantially greater savings for consumers might be made by another method of delivery which has been tried out in New York City. To meet the demands of that city's depressed population for milk at lower cost, officials

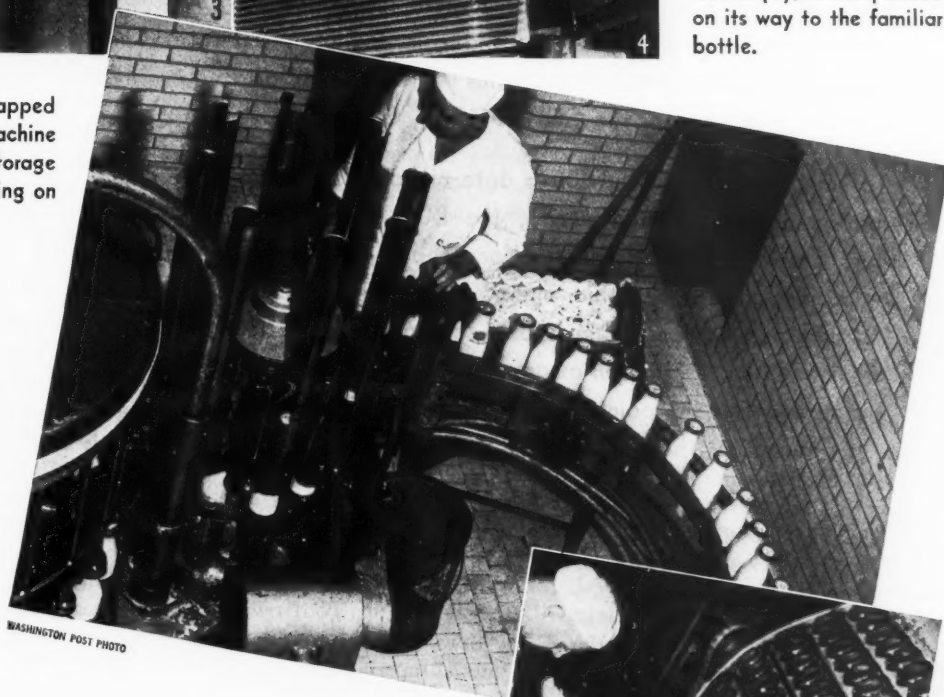
[Continued on page 20]

CONSUMERS' GUIDE



FOR SAFETY'S SAKE, most consumers demand pasteurized milk which harbors the good but shuns the bad bacteria. Milk delivered to the pasteurization plant is run (1) into storage tanks; then through the pre-heater (2), and then a filter. Next into the pasteurizer (3) and into the cooler (4), milk is speeded on its way to the familiar bottle.

Bottles filled and capped by this ingenious machine pass on to a cold-storage room to await loading on delivery wagons.



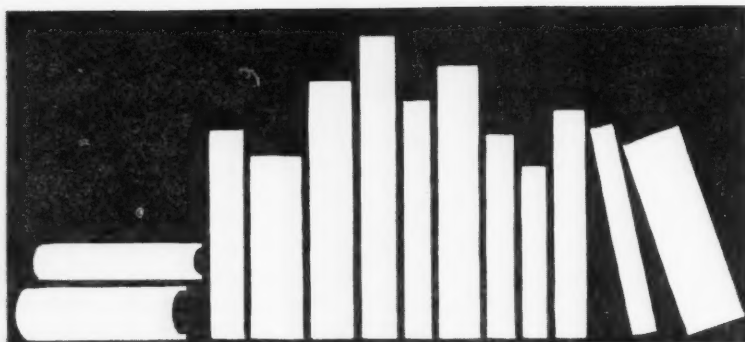
WASHINGTON POST PHOTO

Strategic point in any milk plant is the bottle-cleaning machine. Bottles are fed into this automatic bottle washer, immersed in a caustic solution, doused in a chlorine solution, to emerge washed and sterile on a moving belt that carries them under the filling machines.



WASHINGTON POST PHOTO

AUGUST 23, 1937



Consumers' BOOKSHELF

We start a new policy with this issue of the BOOKSHELF. Previous editions have summarized past publications in the consumer-information field. These bibliographies have been collated, rechecked, and enlarged for publication in a single pamphlet later this year. Release date will be announced in the CONSUMERS' GUIDE.

To help our readers keep up to date on sources of information on consumer problems, the BOOKSHELF from now on will list new publications, books, pamphlets, magazine articles, graphic materials. Agencies releasing such publications are invited to send copies or notices for listing here. Mention of any material does not imply endorsement of the point of view of the author or agency by the CONSUMERS' GUIDE.

DO WE BUY BY CONTENT OR CONTAINER? by Rosamond C. Cook. *Practical Home Economics*, Vol. 15, No. 7. July 1937, pp. 243-244, illustrated. Back copies of this magazine may be secured from *Practical Home Economics*, 468 Fourth Avenue, New York, N. Y. 30 cents. This article is one of a series on "Problems for Consumer Buying Classes." Among the topics treated are: The purposes of containers, package size in relation to unit cost, deceptive packaging, and dual-use containers.

Some projects for the student and a brief bibliography are included.

DENTIFRICES AND TOOTHBRUSHES, by Edward M. Andres, under the editorial supervision of George R. Warner, M. D., D. D. S. *Consumer Guidance Unit No. 1*. 1937, pp. 31, illustrated. Address: Phoenix Junior College, Phoenix, Ariz. 25 cents. Information on the history, selection, and use of dentifrices and mouthwashes; the function, design, and care of toothbrushes. Projects for

students and a bibliography are included.

GUIDES FOR BUYING SHEETS, BLANKETS, AND BATH TOWELS, by Bess M. Viemont, Margaret B. Hays, and Ruth O'Brien, U. S. Bureau of Home Economics. *Farmers' Bulletin No. 1765*. December 1936, pp. 28, illustrated. Address: Superintendent of Documents, Washington, D. C. 5 cents. This bulletin combines two leaflets issued by the Bureau of Home Economics on Quality Buying Guides for Sheets and for Household Blankets previously listed in the BOOKSHELF. The section on towels is new material. Fiber content, construction features, proper sizes for different uses, and informative labeling are some of topics discussed for each product.

FABRIC INSECTS—HOW TO COMBAT THEM IN THE HOME, by W. P. Flint and W. E. McCauley. *Circular No. 473*. May 1937, pp. 12, illustrated. Address: Information Office, College of Agriculture, Urbana, Ill. Free. Describes the physical characteristics and the living habits of such fabric destroyers as carpet beetles, clothes moths, and cigarette beetles. Several effective ways of exterminating these insects are presented.

CONSUMERS' TEST MANUAL. April 1937, pp. 38, diagrams, lithographed. Address: Consumers' Research, Washington, N. J. 50 cents. This test manual includes material on chemical tests for food, food adulterants, substances in water, cleaning materials, and other household materials. General sections on laboratory procedure, apparatus, and reagents are included. This pamphlet is intended primarily for use in courses which include the testing of consumer goods as a part of their

CONSUMERS' GUIDE

work. A knowledge of laboratory technique is necessary for making most of the tests.

ILLUSTRATIONS OF TESTS FOR EVALUATING INSTRUCTION IN SOME PHASES OF CONSUMER BUYING, adapted from a study by Mabel Combs Joyce. Miscellaneous Publication 1910. February 1937. pp. 37, mimeographed, diagrams. Address: U. S. Office of Education, Department of the Interior, Washington, D. C. Limited supply, distributed only to teachers of consumer buying classes. Free. Schoolroom tests are often used only as a basis for giving grades. This booklet, using consumer buying problems as an example, illustrates a more informal testing procedure to enable the teacher to evaluate and appraise the progress of pupils and point the way to future work. The selection of a child's toy, a paring knife, a piece of furniture, a cotton dress, a child's play suit, and an item of canned food indicates the application of the method to various commodity fields.

TAKE CARE OF YOURSELF, by Jerome Ephraim. 1937, pp. 287, illustrated. Address: Simon and Schuster, New York, N. Y. \$2. Contains material on the selection and use of cosmetics and drugs; suggests methods of treating such common ailments as colds, indigestion, constipation, and overweight. Gives information on the care of the teeth, hair, and scalp. In the final chapter, Plain Talk to the Consumer, an analysis is presented of the present status of consumer literacy. The author stresses the importance of the education of consumers in the selection and use of the products they need for everyday living as a fundamental part of any program of consumer improvement.

COOPERATIVE ENTERPRISE, by Jacob Baker. 1937, pp. 266. Address: Vanguard Press, New York, N. Y. \$2. The author of this book was chairman of President Roosevelt's Inquiry on Cooperative Enterprise in Europe. Chapters define the kinds of cooperative enterprise; describe cooperative principles, methods of operation, and causes of failures; and discuss the present status and future prospects of cooperative enterprise in the United States and Europe. Seventeen pages of the last chapter are devoted to a carefully annotated bibliography of books, pamphlets, and magazine articles on cooperatives.

SCHEMES THAT SKIN, by Howard Raver. 1937, pp. 26. Address: Cincinnati Better Business Bureau, 715 Chamber of Commerce Building, Cincinnati, Ohio. Free. This pamphlet is made up of reprints of 26 very brief articles from the *Cincinnati Post*, each describing a fraudulent scheme which has had the attention of the Better Business Bureaus in various sections of the country.

CONSUMER CREDIT—THE COST TO BUSINESS AND THE CHARGE TO THE CONSUMER, by Wilford L. White. 1937, pp. 15, multi-graphed. Address: Marketing Research Division, Bureau of Foreign and Domestic Commerce, Department of Commerce, Washington, D. C. Free. This paper reproduces the talk given by Dr. White, chief of the Marketing Research Division, before the Conference on Consumer Credit held recently at the University of Chicago. In addition to a discussion of the costs of consumer credit, statistics are included on the growth of consumer credit since 1929.

FACTORS INVOLVED IN SATISFACTORY SHAVING, by Lester Hollander and

E. J. Casselman. Journal of the American Medical Association, Vol. 109, No. 2. July 1, 1937, pp. 95-101, illustrated. Copies of the magazine containing this article may be available in some libraries. Single copies of this issue may be secured from the American Medical Association, 535 North Dearborn Street, Chicago, Ill. 25 cents. This report on the factors giving the most satisfactory shaving results is based on a 4-year study of shaving made at the Mellon Institute of Industrial Research.

CONSTRUCTION OF PRIVATE DRIVEWAYS, by David M. Beach, U. S. Bureau of Public Roads, Department of Agriculture, Miscellaneous Publication 272. July 1935, pp. 30, illustrated. Address: Superintendent of Documents, Washington, D. C. 10 cents. Gives suggestions on laying out drives, turning areas, and street entrances; plans for the construction of drives from gravel and stone, bituminous materials, concrete, and brick. Suggestions for handling steep grades and building retaining walls are included.

Industrial Standardization and Commercial Standards Monthly, July 1937, contains three short articles of interest to consumers: (1) "Consumer-Retailer Relations Council to Promote Consumer Program"; (2) "National Retail Dry Goods Association Officially Affirms Consumers Standards" gives the five-point platform adopted by this trade association calling for merchandise standards; (3) In "The Consumer Movement—A Boon to Merchandisers", in which a staff member of an advertising agency announces "Eight million women, and more, are ready to be used in every manufacturer's and retailer's sales promotion plan."

TIPS FOR PEACH FANCIERS

A bumper crop is piling baskets full and pushing prices down on this vitamin-starred fruit

SCENT of peach pie running over in ovens and pungence of peach preserves bubbling in pots float over the land as housewives get busy with the 1937 peach crop. Thousands of bushels of peaches will go to the commercial canneries this year; more thousands will reach the drying trays. The yield bending low the boughs of the Nation's peach trees is the heaviest since 1931.

Peaches, it seems, after a bad case of doldrums are staging a comeback. The 1937 crop will probably touch 57,700,000 bushels—a gain of 15 percent over 1936 figures. Almost all the important peach States point with pride to 1937 prospects—New York, New Jersey, Pennsylvania, North Carolina, Virginia, Michigan, Illinois, Tennessee, and Arkansas. Although California's gains have been slight, she still stands head and shoulders above her nearest competitor with a 22,000,000-bushel crop of clingstones and freestones. Her neighbors, Utah and Washington, are among the few States that admit heavy losses. Hardest hit in crop prospects is Georgia, long the acknowledged peach queen of the East. Her production slashed in half, she has temporarily yielded her crown to Pennsylvania.

That this year's crop does not exceed the peak production of 1931 is not surprising, for peach trees in the United States declined from 79,000,000 in 1930 to 67,000,000 bearing trees 5 years later. Not only market conditions but weather militated against peach production in those years. Above the Mason-Dixon line frost brought bud-killing and tree injury in its train. How-

ever, growers soon set about the business of planting new trees, spurred on by the relatively high prices that peaches were bringing at market. Besides, peach growers have come to take misfortune in their stride, for theirs is often a speculative business. The peach is perishable and the tree is beset by diseases and pests such as the "yellows" and San Jose scale. It is not long-lived nor is it hardy. Overproduction with resultant low prices for producers is another hazard that has turned growers' hair gray. California is making an effort to rout the low price enemy by enforcing a marketing agreement which limits shipment of the commonest-grown freestone peach—the Elberta—to U. S. No. 1 grade of a certain size.

The peach owes its origin to China, its name to Persia—one of the stopovers in its globetrotting career. In fact, the peach lingered there so long it became known to the ancient world as the Persian apple. The Chinese invested the peach with the glamour of superstition. To us a peach is a peach—good in its own luscious right, but bearing no omen of good or ill fortune.

Definite fruit characteristics differentiate the races and varieties of peaches. Peaches may be smooth-skinned or covered with a heavy down. They may have white flesh or yellow, flesh closely clinging to the stone or falling free from the pit. In shape they can be round, or with a pronounced beak at one end. Again they can be as irregularly formed as the odd saucer-shaped members of the Peento peach family.

Both yellow and white peaches come as clingstones or freestones. Clingstones play their important part in commercial canning though some are sliced and home-pickled. Preference in peaches for fresh dessert use, drying, and home cooking points to the freestones. On the basis of geography, too, peaches can be divided. Most western peaches find their way to the cannery or the drying rack; eastern varieties are served as dessert fruit.

Just as there are style trends in clothes, there are fashions in fruit varieties. Right now the yellow-flesh peaches are most popular. Young hopefuls of the peach field are the varieties that have resulted from breeding work that has gone on for some 25 years. New features are improved flavor, juice content, texture, and the ability to attain a full, natural ripeness on the tree and yet withstand the strain of shipping long distances. Of these college-bred varieties, Halehaven and Golden Jubilee are making their mark at roadside stands and local markets in certain sections. The alliterative trio, Vedette, Valiant, and Veteran, originating at Vineland, Ontario, hold promise of success also.

No young upstart has been able to steal the show from Elberta, a standard variety of freestone. The fruit matures in season to a size $2\frac{3}{4}$ inches long by $2\frac{1}{2}$ inches wide. Its skin changes on maturity from greenish yellow to orange yellow, often mottled with red. Skin is thick, tough, and downy. Flesh is yellow, stained with red near the pit and is juicy though stringy, firm, and sweet. In



One way of packing peaches is in the 6-basket carrier, especially suitable for early, tender peach varieties such as Carman, Hiley, and Belle. Above are the 2-2, 3-2, and 2-1 pack. These terms indicate the size of peach—medium, small, and large—that went into the 4-quart baskets.

quality Elberta falls short of Crawford and Champion peaches and it is too tart to suit some tastes, yet be-

cause it handles well commercially, holds its own as the most widely grown variety in the United States.

Should choice turn to a white-fleshed peach, Champion is without a peer when well-grown, but the fruits though attractive run small and are apt to be off color. This soft-fleshed variety has been an easy prey to brown rot and is no longer grown commercially.

Only three-way fruit—that is, good for canning, drying, and shipping—is Muir, boon to experienced peach men during the depression. This variety seems equally at home on Eastern ground. Though unprepossessing in appearance, given a chance to prove its worth for culinary purposes, it more than lives up to expectations.

Not every consumer is able to buy tree-ripened peaches, but by a little care, one can and should buy ripe peaches. Because peaches are extremely perishable, they are often picked slightly immature so that they will stand shipping better. Sometimes they are picked so immature that they cannot ripen satisfactorily, will shrivel, and generally lack the tender, tasty flesh of ripe fruit. Ripeness is indicated by firmness and by the extent to which the green on the under side of the peach has turned to a whitish-yellow color.

For home purposes, whether for canning or eating fresh, choose peaches of the yellow-fleshed mid-season and late varieties such as Elberta, Salway, J. H. Hale, and Smock. Among other good canning varieties are Golden Jubilee and Vedette.

Peaches of fine quality should be firm, free from blemishes, and of fresh appearance. Ground color should be whitish or yellowish sometimes combined with red blush. A red cheek alone is not a true sign of maturity, however, since color mottlings vary with variety.

Overmature peaches, recognized by softness to the touch, bruise easily, are fit only for immediate

[Concluded on page 23]

Your Food Supplies & Costs

FOR the second month in succession a sharp reduction in fresh vegetable prices offset price increases in all other major food groups, and retail food costs in general dropped 0.4 percent from June 15 to July 13. Large potato supplies continued to be the major factor in the downward swing of vegetable prices, but prices of almost all truck crops were lower. A marked increase in meat prices, however, nullified most of the effect of lower vegetable prices.

Recent declines in general food costs have helped to narrow the spread between current costs and those of a year ago. On May 13 food costs as reported by the Bureau of Labor Statistics were 8 percent above a year ago. Two months later, on July 13, they were only about 2 percent higher than in the same month in 1936. Higher prices for meats and cereals and bakery products are mainly responsible for costs now being above their 1936 level.

Price changes in different sections did not follow the change for the country as a whole during the 4-week period ending with July 13. Along the Atlantic seaboard food costs moved up around 0.5 percent. In the East Central and Western States the cost of the consumer's market basket dropped about 1.5 percent. Largest decline occurred in the West North Central States and amounted to 2 percent. A sharp rise in egg prices in the New England States was the major factor in causing this area to have the largest increase of 0.7 percent.

Among the various types of food in workers' market baskets generally

meats and eggs showed the biggest price rises between June and July. At this time of year eggs usually get more expensive. During the month they jumped 9 percent in price. Marked price increases in pork and beef and small advances in poultry and lamb pushed up meat costs 5.4 percent. This carried meat to its highest price level for any month since October 1930. Meat prices have been going up since mid-February but this was the largest rise this year. Dairy products advanced seasonally 1.6 percent. Changes in the price of other food groups were negligible except for fresh fruits and vegetables.

Fresh fruits and vegetables cost 15 percent less in mid-July than at the middle of June, with most items except citrus fruits lower in price. Compared with a year ago, fresh fruits and vegetables were 18 percent lower. Other groups were higher by the following amounts: Meats, 13 percent; fats and oils, 9 percent; cereals and bakery products, 6 percent; dairy products, 2 percent; eggs, 0.3 percent.

Relatively large fruit and vegetable supplies are in prospect during the remainder of the year. As marketings of late crop vegetables and fruits increase seasonally, prices probably will go down and drop below their level last year. Production of all truck crops in the late producing States is expected to be about one-sixth larger than last season, and about 20 percent above average. The late potato crop, which is now starting to move to market, gives signs of being 18 percent larger than a year ago. The crop of peaches for

August and September shipment is expected to be twice as large as a year ago. Apple production will probably be as much as 70 percent greater than last year's small crop. The 1937 pear crop is of record size.

Potato prices to consumers continued to drop sharply and on July 13 were selling at about half their level a year ago.

Slightly lower pork prices are in prospect for consumers this fall. The hog-marketing year commences on October 1, at which time spring pigs begin to move to market, and prices customarily go down. The seasonal increase in slaughter from October through December probably will be less than usual because of the small 1937 spring pig crop and the tendency for farmers to hold their hogs for marketing at heavier weights in 1938. However, prices most likely will register their usual decline because the demand for products for storage is expected to be less than a year ago.

Retail pork prices advanced sharply from June 15 to July 13 and reached their highest level for this month since 1930 as July slaughter supplies dropped to their lowest level since 1896. Prices of fresh cuts registered the major increase, going up 4 cents a pound, while smoked items were from 1 to 1.5 cents a pound higher. Lard prices dropped slightly. Compared with a year ago fresh pork is 8 cents a pound higher, ham and lard are up 1.5 cents a pound. Bacon is only slightly higher.

No immediate change in cattle prices is expected. During the winter and spring, however, price de-

clines may occur as a result of increased supplies of grain-fed cattle. Prices of better-grade cattle probably will continue at or near their present relatively high levels, at least through the early fall. The usual fall decline in lower-grade cattle prices is likely to be small because of a good demand for cattle for feeding.

Beef prices to consumers made their sharpest increase of the year when prices of steaks and roasts, respectively, advanced 3.5 and 2 cents per pound from June 15 to July 13. On July 13, beef prices were at their highest level for any month since the middle of 1930. Compared with a year ago steaks and roasts are up 10 and 6 cents per pound, respectively.

Lamb prices ordinarily reach their seasonal low point in October or November, but this year no further material price decline may occur. Live lamb prices are expected to remain at or near their present level during the remainder of the grass-fat lamb season which ends in November. Lamb slaughter probably will increase less than usual from September through November because of a heavy demand for lambs for feeding purposes.

Increases in retail lamb prices were the lowest in the meat group during the 4-week period. Rib chops went up 2 cents a pound, and most other items advanced 1 cent per pound. Whereas pork and beef prices were much higher than a year ago, most lamb cuts were only around 1 cent a pound higher.

Usual advance in butter prices is expected during the remainder of 1937. Ordinarily butter prices reach their low in June and then move up to a peak in November or December. Prices generally do not go up sharply until after August. Because of relatively good pastures and increased feed supplies, milk production has continued at relatively high levels. Butter production probably will continue larger than in 1936 for

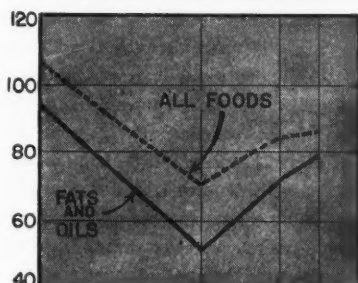
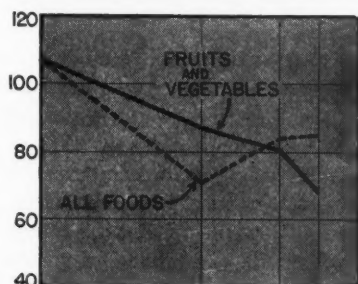
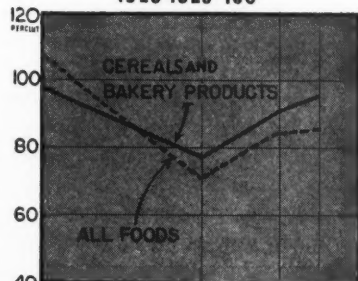
several months, but during the latter part of the year may only be about the same. Retail butter prices remained unchanged at 38.3 cents per pound from June 15 to July 13, but were 2 cents a pound lower than a year ago.

Larger egg supplies than a year ago are in prospect for the remainder of 1937. Prices probably will go up less than they usually do in these fall months. During the last half of the year egg supplies come primarily from cold storage. Egg prices to consumers advanced seasonally 2.5 cents per dozen from June 15 to July 13. On the latter date prices were

at about the same level as a year ago.

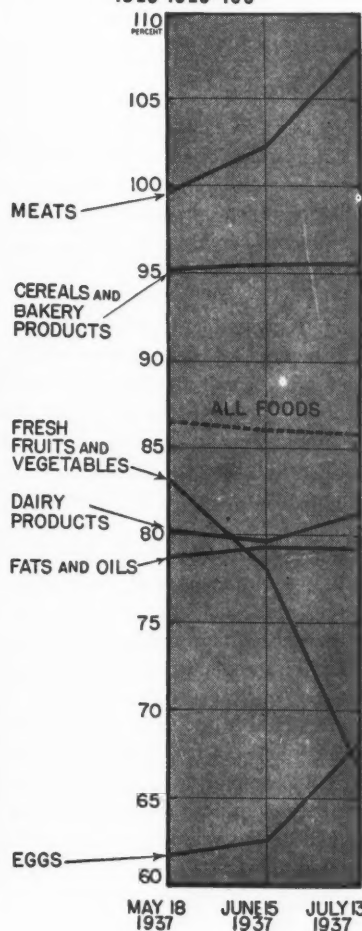
Average retail white bread prices for the United States remained unchanged during the 4-week period. This marked the first period since February in which no increase has occurred. On July 13 the price of white bread was 0.6 cent a pound higher than a year ago. The estimated average wholesale cost of the ingredients used in making a typical pound of bread, however, was only 0.2 cent a pound above a year ago. As a result the margin between retail prices and ingredient costs on a pound loaf of white bread has widened by almost a half cent.

**A PERSPECTIVE OF FOOD COST CHANGES
1923-1925=100**



JULY 15 1929 JULY 15-JULY 14-JULY 13 1933 1936 1937

**A CLOSE-UP OF FOOD COST CHANGES
1923-1925=100**



AUGUST 23, 1937

MILK PARADE

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set up a system whereby delivery is made direct to consumers from a dealer's wholesale truck within a 2-hour period each morning. Sales are for cash, and bottles must be returned or a deposit forfeited. Actual expense incurred in this method of distribution has not been reported, but it is perhaps significant that dealers were eager for the chance to deliver and sell this milk at 8 cents a quart when the regular retail delivered price was 13 cents and the store price 12 cents. Significant also is the demonstration in New York City that a cost saving of 3 or 4 cents a quart to consumers will stimulate an abundant willingness of consumers to purchase milk by this inconvenient method. At one time 90,000 quarts per day were being sold in this way from 150 milk depots.

Cities whose health officers accept some responsibility for getting more milk consumed by needy families, as well as for keeping milk clean, could readily determine for their own localities what saving in handling expense is available to consumers by this method of distribution. New York City's experiment has been carried out with some assistance of public funds. But an analysis of its operation indicates no reason why it cannot proceed on a self-supporting basis.

But this is a story of a competitive milk system, the story of many competing milk companies. What, the Milwaukee Common Council asked, would be the cost of milk distributed noncompetitively by the city? How much would it cost to buy milk from farmers and sell it through one city-owned company? And how, it wanted to know, would the cost of such a system compare with present competitive costs. What are the wastes of competition and what are the savings of public distribution?

To answer these questions, four large public agencies, the Civil Works Administration, the Federal Emergency Relief Administration, the city of Milwaukee, and the United States Department of Agriculture, studied milk in Milwaukee for more than 2 years, peering into every nook and cranny of the Milwaukee milk system, computed, estimated, drew plans.

Plans for a publicly owned milk system (in which the Department of Agriculture had no hand, incidentally, for it only participated in the study of milk as it is distributed in Milwaukee today) indicate that a publicly owned system of milk distribution in Milwaukee could sell milk to the consumer for 2 cents per quart less than the present price and could pay farmers 21 cents more a hundredweight for their milk.

Consumer conscious, the investigators began their study of Milwaukee milk by studying Milwaukee milk consumers. All Milwaukee families, they discovered, used butter, nine-tenths of them used fluid milk, two-thirds of them used cheese, only one-fourth of the families studied used cream.

Average Milwaukee family used $1\frac{1}{3}$ quarts of milk a day, a quart of buttermilk once a month, a pint of light cream once every 16 days, a pint of heavy cream once every 2 months, a quart of ice cream once a month, a pound of cottage cheese every 20 days, a pound of hand-spread cheese every 15 days, and a pound of butter every 3 days.

Milk consumption varied according to the economic level of the families studied. Cream consumption was limited almost exclusively to families of middle and high incomes. In a low income district of Milwaukee, the per capita daily consumption of milk was only one-half pint, the average for the city was slightly over seven-tenths of a pint. In one section of Milwaukee the average

person used a pint of cream only once in 3 years, in a high income section of Milwaukee the average person used a pint of cream about once every 25 days. Milk consumption, too, varied in families according to the number of children and the nationality of the family. Negroes, for instance, used comparatively little milk, though this may perhaps be due to the fact that the average income of the negro families studied was considerably lower than the income of the white families studied.

Milwaukee consumers buy their milk chiefly from distributors' wagons; four-fifths of the 8,800 families studied got all their milk from distributors' wagons. Families using least milk bought their milk in stores. Families using most milk bought milk both from distributors' wagons and from stores. On the other hand practically all butter was sold through retail stores. Retail stores handled approximately one-sixth of the fluid milk sold and one-fifth of the fluid cream. Most stores studied, incidentally, reported a sharp decrease in the amount of fluid milk sold in 1934 as compared with 1931 and a sharp increase in the sale of canned milk. Public institutions accounted for one-eighth of Milwaukee's fluid milk, two-fifths of its canned milk.

Price, a primary concern of consumers, also received the attention of the Milwaukee investigators. Previous studies in New York indicate that a 1-cent increase or decrease in the price of a quart of milk makes very little difference in the consumption of milk, but a 2-cent increase or decrease in the price of milk has an immediate effect on consumption. Thirty percent of Milwaukee consumers stated that they would use more milk if the price of milk were reduced 2 cents a quart. Among the families with low income, milk consumption, they said, would increase 14.5 percent if the price of milk were

dropped 2 cents a quart. Families with intermediate incomes would increase milk consumption 11.1 percent and families with the highest incomes would increase consumption 6.2 percent. Butter consumption would increase 15.8 percent if the price of butter were reduced 4 cents a pound.

Milwaukee milk dollars in 1933 paid 53 cents to the farmers, 46 cents to the distributors. In 1934 the farmer's share of the milk dollar was 46.8 cents. Beginning in 1923, when the farmer received 58.1 cents of the milk dollar, down to 1934, when he received 46.8 cents of the consumer's milk dollar, the farmer's share consistently decreased. During this same period the retail price of milk declined from 10.5 cents to 9.4 cents and the distributor's gross margin increased from 4.4 cents to 5 cents.

Distributors' shares in the consumer's milk dollar are not all profit, however. In 1933 for instance, the distributor paid 14.8 cents out of each dollar for processing the milk, of which 6 cents was wages. He paid 26.7 cents for delivering the milk, of which 19.5 cents was wages. It cost the distributor 2.42 cents to sell the milk, of which 1 cent was paid out in wages. Administrative expenses cost the distributor 3.28 cents. Altogether his expenses, as shown by his accounting method, totaled 47.2 cents. Since he received only 46 cents of the consumer's dollar, however, in that year he incurred a loss if his system of figuring was correct. In other words, the consumer received \$1.01 in milk and milk services for each dollar he spent.

Consumers have often heard of the economies that can be gained from the operation of a large-scale plant, but large-scale operation does not necessarily mean economies; sometimes bad management can cancel the gains that result from large-scale operation. The Milwaukee investigators discovered that in April



With delivered milk at 13 cents a quart, when New York City made possible purchases by relief families at 8 cents a quart during a daily 2-hour period at central depots, dealers were eager to sell and consumers, certified to by relief agencies, lined up to buy.

1934 medium-sized milk plants were more efficient than large milk plants. Men working in medium-sized milk plants handled 984 quarts of milk per man day. In large plants this average was 830 quarts per man day, in small plants 484 quarts. Average output per man daily for the entire city of Milwaukee was 845 quarts of milk per day per man.

Boston auditors, at the request of the Massachusetts Milk Control Board, took apart the accounts of the Boston dairies to discover significant facts bearing on large versus small operations. They found 80 percent of Boston's milk supply in 1935 was furnished by 7 percent of Boston's milk dealers. The remaining 20 percent was supplied by 93 percent of the city's milk dealers. Thus a few big dealers were supplying most of the milk, and a great many small dealers supplying a small part of the city's milk.

Comparing costs of big and little

dealers, the auditors found the big ones had the jump on their smaller competitors as far as processing costs were concerned. This part of their operations was four-tenths of a cent a quart less. But against this economy was a much higher cost for the retail delivery operation. Here the little dealers were shown to be doing a much less expensive job, with average delivery costs 1.1 cents a quart under such costs of the big distributors. Total city operations on this home-delivered milk in the case of the big dealers were two-thirds of a cent a quart greater than in the case of the small dealers. Processing and delivery of cream to Boston homes was found to cost one-half cent less per half-pint bottle when done by the smaller dealers. Wholesale deliveries of both milk and cream were performed at less cost by large dealers than by small ones and they enjoyed the lion's share of this class of business.

Another measure of efficiency is the used capacity of a plant. By this standard, Milwaukee competitive milk distribution does not show up very well. Twenty-two plants in Milwaukee could have pasteurized 71 percent more milk than they actually pasteurized in April 1934. They could have filled 122 percent more bottles than were actually filled and washed 91 percent more bottles than they actually washed. This may be due to the fact that milk sales in individual companies vary much more than the milk sales of all companies. Money, time, and labor is expended by milk companies in an attempt to capture milk markets from each other. Because of the greater variation in sales, plant capacities must be higher than necessary to take care of sales variations. Milk plants therefore operate much below capacity during shifts in the milk market in milk sales from one company to another.

Milk plant investments in Milwaukee increased from 1928 to 1934, while milk sales volume declined. For every quart of milk sold in 1928 there was 5.4 cents invested in milk equipment. By 1934 each quart of milk sold had represented an investment in plant of 6.6 cents. Altogether 20 of the 25 plants operating in Milwaukee handling 97 percent of the Milwaukee milk supply had net fixed assets of \$3,300,000. In plant equipment this represented a bottle-filling capacity of 90,000 quarts an hour, a bottle-washing capacity of 78,000 quarts an hour, and a pasteurizing capacity of 70,000 quarts an hour. The total worth of these 20 companies was 7 million dollars. In addition, they used about 2½ million dollars of borrowed capital.

Thus the cooperative investigators of Milwaukee milk distribution blocked in the picture of milk in Milwaukee: A wasteful delivery system, a relatively inefficient utiliza-

tion of equipment, a consistent need for milk by the people of Milwaukee, and at the same time a milk economy that was not particularly profitable to the businessmen who distributed the milk.

Alongside this picture was placed a perspective for a public milk-distributing system. They pointed out, however, that a publicly owned plant is not the only alternative to the present wasteful competitive system. For instance, the investigators suggested that milk prices and milk efficiency in Milwaukee might be benefited by zoning sales territories among distributors to reduce duplication. It has been suggested that Milwaukee might regulate milk companies just as many public utilities are regulated. It might begin to correct the mistakes of competition by permitting milk distributors to process milk but by distributing the processed milk through a publicly owned distributing system. Another suggestion would grant a closely supervised monopoly of milk distribution in Milwaukee to one distributor just as streetcar companies are given franchises.

Exploring the possibilities of a publicly owned milk-distributing system, however, the investigators estimated that such a system would need one large city plant and five country stations so situated that no producer would be more than 2 hours from the station to which he was supposed to deliver milk. The country stations would assemble the milk for delivery, transship it to the central distributing plant in the city from which it would be distributed. The contemplated milk-distributing system in Milwaukee would have a pasteurizing capacity of 100,000 pounds of milk an hour, sufficient to take care of the needs of Milwaukee consumers until 1950. Three cream separators would give this public plant a cream-producing capacity of 11,000 pounds of cream

an hour. There would also be equipment for the manufacture of Vitamin D milk, chocolate milk, buttermilk, and additional machinery capable of manufacturing 25,000 pounds of butter in 18 hours.

Ice cream machinery in the public plant would have a capacity of 1,400 gallons an hour. Other equipment would enable the public distribution system to transform surplus milk into cottage cheese and powdered skim milk. The 16 air-conditioned buildings contemplated by the public plant would cover 24½ acres. The plant would handle about 1½ million pounds of milk daily and would deliver milk to consumers 12 to 24 hours fresher than the milk they now receive. Altogether the plant would employ 1,300 persons, of whom about 50 percent would be engaged in the delivery of milk to the consumer.

Such a plant would cost 5 million dollars. An additional 5 million dollars would be necessary to reimburse present distributors for their plant equipment. The daily operating cost of the public plant would be about \$11,500, of which about half, or \$5,700, would be the daily wage bill.

Estimated savings under this arrangement would result in a 2-cent-a-quart savings to consumers and allow an additional 0.301 cent per quart for milk producers. At the same time, even with these savings, the public milk system would be able to pay for itself in 19 years. Savings would come from economies in the processing and delivery of milk. In the public milk plant, processing milk would cost 0.83 cent per quart. In the most efficient plants studied by the Milwaukee investigators this cost was 1.01 cents. In the least efficient plant studied this cost was 4 cents. Delivery under the unified system would cost 0.82 cent a quart. The most efficient competitive companies studied had a delivery cost

of 0.88 cent a quart, and the most inefficient had a delivery cost of 2.49 cents per quart of milk. The unified public company would be 0.24 cent per quart more efficient than the most efficient private company now operating and 4.86 cents a quart more efficient than the least efficient plant now operating.

MAPPING THE ROUTE

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becomes less, workers themselves improve their consumption habits, making their diets a better balance of foods high in energy-giving qualities and foods starred for their vitamins and minerals.

Arriving at these conclusions, the researchers next turn their spotlight on agriculture. What can agriculture do, they ask, to meet the need for more and better kinds of foods for workers?

To get the answer to this question they turn to the International Institute of Agriculture. From them comes the report that: "Agriculture has not only kept in step with the demand for its products but in some respects has outstripped such demand. True, the information on the subject is far from complete. It is also clear from available data that many of the protective foodstuffs especially stressed by nutritive science are still produced in quantities deficient to meet even minimum needs. Nevertheless, the outstanding and important fact which emerges from a study of the data is that *technically* agriculture is in a position to meet the requirements for foodstuffs for an adequate diet. Revolutionary advances in the production, transport, storage, and distribution of foodstuffs have made *potentially* possible a much higher level of nutrition for all of us."

Putting potentialities into practice is the problem of economics and statesmanship.

TIPS FOR PEACH FANCIERS

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consumption. Even if the outer skin of a bruise is not discolored, the bruised flesh is too soft and discolored for use.

Watch for unevenness in shape and small surface punctures exuding a gummy substance. These are tell-tale clues of worm injury. Brown circular spots are warnings of decay ahead, too.

The United States has set up standard quality grades that are in general use among shippers. These define the requirements of the various grades, and specify the tolerances of defective peaches which may be allowed in each grade. The size of the peaches is stated separately from the grade. Thus peaches of any size—2 inches or 2½ inches—may be rated as U. S. Fancy, U. S. Extra No. 1, U. S. No. 1, U. S. No. 2.

Although such descriptions are of

indirect benefit to consumers, their general use is more important to the trade in providing a common language for shipper and distant buyer.

Grades for canned clingstone peaches consist of U. S. Grade A (Fancy), U. S. Grade B (Choice), U. S. Grade C (Standard). The same grades apply to special packs for hospitals in which no sugar goes into the can. Other grades below U. S. standard requirements hardly concern the homemaker.

Cooks don't have to go to a lot of trouble to turn out a delicious dessert made of peaches. There is nothing much simpler to prepare and much more delectable to eat than a dish of peaches and cream. It's healthful, too, for yellow peaches are an excellent source of Vitamin A, fair source of B, good supply of C. And remember, if dessert has to stand awhile, lemon juice squeezed over the peaches will prevent them from turning a dusty brown.

STUDY QUESTIONS FOR THIS ISSUE

1. What new approach to the problems of workers has the International Labor Office been making?
2. When nutritionists say that diets are "deficient", what do they mean?
3. What did American experts find out about diets of workers in this country?
4. Does there seem to be a need for more foods by workers in this and other countries?
5. Does the International Labor Office think that agriculture is able to supply foodstuffs for an adequate diet?
6. What food values do grapes have?
7. Does this year's crop of grapes promise to be large?
8. What types of grapes are sold as raisins?
9. What are some of the things consumers should watch for in getting best value for their money when buying grapes?
10. Why is it wise to buy pasteurized milk?
11. How many milk companies deliver milk to the people living in your block?
12. How might consumers help to cut delivery costs if they were assured they would get the benefit of these economies?
13. How has New York City arranged to get milk at a lower cost to relief families?
14. Are relief families in your city helped in getting more milk in their diets? How?
15. In what ways did the Milwaukee investigators suggest milk prices might be reduced?
16. What are the prospects for the 1937 peach crop?
17. What is the food value of peaches?
18. When you buy fresh peaches what quality points should you watch for?
19. Do any stores in your neighborhood sell canned peaches which are graded according to Government standards?

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A bumper crop is piling baskets full and pushing prices down on this vitamin-starred fruit.

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